Utah OSHA Compliance Assistance Newsletter

(Summer 2004)

Inside this issue:

If you have any questions call at (801)530-6860
or email at: ssafiullah@utah.gov

Fall Protection Alert

Utah OSHA is notifying all employers utilizing fall protection that as of January 1, 2005, Utah OSHA will no longer be enforcing the Interim Fall Protection Guidelines. State plan states are required to be as effective or more stringent than the federal regulations. The interim protection guidelines allowed alternate work practices due to the infeasibility of applying all the requirements of the standard. However, due to improvements in the availability of higher protection in the construction industry the interim protection is no longer needed. The construction industry standard for fall protection 1926 Subpart M Fall Protection must be followed for all fall protection purposes subject to Subpart M in the construction industry. The fall issue of the compliance assistance newsletter will contain details on the various work practices affected by this change.

The regulation can be accessed on-line at:

1926.500 - Scope, application, and definitions applicable to this subpart.
http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10756

1926.501 - Duty to have fall protection. http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10757

1926.502 - Fall protection systems criteria and practices.
http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10759

or call UOSH at 530-6901 for further assistance

How can Utah OSHA help the public sector employees and various associations and organizations? Utah OSHA can offer help through two distinct functions:

- **Public Sector Consultation: Often the state, city or county employees are under the misconception that they are not covered by the OSHA regulations. As a consultant for the state, city or county, we perform full site surveys including monitoring, training and education etc. A public sector survey comes without any citations or penalties. You can call Utah OSHA at (801)530-6860 for more information.**
- **Compliance Assistance: Through Compliance Assistance we provide service such as, training, presentations, workshops etc. Compliance Assistance Specialists (CAS) can provide general information about OSHA standards and compliance assistance resources. They respond to requests for help from a variety of groups, including small businesses, trade associations, union locals, and community and faith-based groups. They are available for seminars, workshops, and speaking events. They promote cooperative programs, such as Consultation Programs, SHARP, the Voluntary Protection Programs, the Strategic Partnerships Program, and the Alliance Program. They also promote OSHA's training resources and the tools available on the OSHA web site.**

SHARP

What is SHARP?

The Safety and Health Achievement Recognition Program (SHARP) recognizes small employers in the public and private sector who operate an exemplary safety and health management system. Acceptance into SHARP by OSHA is an Achievement of status that will single you out among your business peers as a model for worksite safety and health and will reap rewards for your business. Upon receiving SHARP recognition, your worksite will be exempt from programmed inspection during the period that your SHARP certification is valid.

How Can You Participate in SHARP ?

Contact: Consultation at 1-801-530-6857 for private sector and 1-(801)-530-6860 for public sector

Main Elements of a Drug Free Workplace

Employers implement drug-free workplace programs to protect their businesses from the impact of drug and alcohol abuse. A drug-free workplace program generally includes five components:

✓Drug-Free Workplace Policy
✓Supervisor Training
✓Employee Education
✓Employee Assistance
✓Drug Testing

For more information on substance abuse programs call UOSH at (801)530-6860

Top 25 violations cited in Utah *(October 2002 through September 2003)*

	Description	Standard
1	Scaffolding	1926.451
2	Fall Protection Scope/Applications/Definitions	1926.501
3	Excavations, General Requirements	1926.651
4	Respiratory Protection	1910.134
5	Fall Protection Training Requirements	1926.503
6	Fall Protection Systems Criteria and Practices	1926.502
7	Ladders	1926.1053
8	Elec. Wiring Methods, Components and Equipment for general Use	1926.405
9	Hazard Communication	1910.1200
10	Excavations, Requirements for Protective Systems	1926.652
11	Electrical, General Requirements	1926.403
12	Head Protection	1926.100
13	Construction, Housekeeping	1926.25
14	Manually Propelled Mobile Ladder Stands and Scaffolds	1926.453
15	Stairways	1926.1052
16	Electrical, Wiring Design and Protection	1926.404
17	Permit-Required Confined Spaces	1910.146
18	Demolition, Preparatory Operations	1926.850
19	Powered Industrial Trucks	1910.178
20	Electrical, Wiring Methods, Components and Equipment	1910.305
21	Cranes and Derricks	1910.550
22	Material Handling Equipment	1926.602
23	Working Over or Near Water	1926.106
24	Stairways and Ladders, Training Requirements	1926.1060
25	Electrical Systems Design, General Requirements	1910.303

Hearing loss among construction workers

✓ More than one-half million construction workers are exposed to potentially hazardous levels of noise. You lose hearing slowly, so you may not notice. But if you can't hear, you may be in danger on the job. Construction noise regulations lack the specificity of general industry noise regulations. The main concerns with construction work are:

- Mobility of construction workers,
- The temporary and seasonal nature of employment,
- The small size of construction companies,
- The prevalence of self-employment.
- Perceived difficulties in hearing and understanding speech communication and warning signals.
- In addition, masking by noise of necessary communication and warning signals is of particular concern in construction, where recent research demonstrated the association between fatalities and the failure to hear reverse alarms.

✓ The following elements of a successful hearing conservation program can serve as a model for the construction industry:

- Positive safety culture through training and education
- Baseline annual audiograms
- High percentage use of hearing protection device (HPDs) such as ear plugs or ear muffs

- A centralized record-keeping procedure, which helps solve the problem of worker mobility
- Controlling construction noise at the source is the most reliable way to protect worker hearing.

✓ The highest percentages of overexposed workers occur in highway and street construction, carpentry, and concrete work.

✓ Chemical and Combined Exposures

- Solvents, such as toluene and xylene, appear to exacerbate the hazard to hearing, particularly when combined with noise,. In a report on construction laborers, toluene and xylene are high on the list of hazardous chemicals and physical agents in terms of estimated number of exposed workers.

✓ Practical Considerations

- The need for construction workers to communicate with each other is as great or greater than in most manufacturing industries. This is particularly true of personnel operating heavy and mobile equipment, such as loaders, dozers, and cranes, as well as personnel on the ground or in structures who need to communicate with them. Unless these workers are fitted with effective two-way or multiway communication systems, HPDs are likely to be viewed as a hindrance to communication and the perception of warning signals. This is especially true of workers who have already incurred a noise-induced hearing loss.
- Posting of noise hazard areas when average exposure levels exceed 85 dBA or peak sound levels exceed 135 dBA. Employers must supply HPDs and workers must wear them in areas that have been posted.
- Noise doesn't just hurt your hearing. You can also get tinnitis, a ringing sound in your ears. Too much noise can make you tired and nervous. It can raise your blood pressure and add stress that can help

lead to heart disease.

✓ Exposure Levels

- Noise levels are measured in decibels (dBA). We talk at about 70 decibels. Decibels are measured on a scale like the one for earthquakes. So when the decibels go up a little, the noise goes up a lot. 73 decibels is 2 times as loud as 70. OSHA has rules about how long you may be exposed to a noise level, before you must wear hearing protection:

- Allowed to be unprotected At this noise level

  Up to 8 hours 90 decibels

  Up to 4 hours 95 decibels

  Up to 1 hour 105 decibels

- When the noise is 95 decibels, OSHA says you may work with no hearing protection for only 4 hours. Even so, this noise level is not safe; 1 in 5 people exposed regularly to 90 decibels (as OSHA allows) will lose some hearing. Short, very loud (impact) noises can do the most harm.
- If you have to raise your voice for someone 3 feet away to hear you, the site may be too noisy and you need hearing protection.

✓ Most construction noise comes from equipment. These decibel levels have been measured:

(As a reference, the pain threshold for nose is 120 dBA)

Equipment	Decibels (dBA)
Pneumatic chip hammer	103-113
Earth Tamper	90-96
Jackhammer	102-111
Crane	90-96
Concrete joint cutter	99-102
Hammer	87-95
Portable saw	88-102
Earthmover	87-94
Stud welder	101
Front-end loader	86-94
Bulldozer	93-96
Backhoe	84-93

✓ Protect yourself by making the workplace quieter.

- Ask contractors to buy quieter models when they buy new equipment.
- Good maintenance, new mufflers, and other changes can make a difference too.
- Put sources of loud noise, like compressors and generators, as far away from the work zone as possible.
- Also, plywood or plastic sheeting set up around machinery can shield noise.

✓ Cut the time you spend around loud noises.

- Ask to have workers rotated from noisy jobs to quieter jobs, if possible.
- Take rest breaks away from noisy spots.

✓ Wear protective equipment.

- OSHA says, if changes the contractor makes do not get noise levels low enough (below 90 dBA), you must wear hearing protection. And you should be trained to use it.
- Use hearing protection that is easy to put on and take off. Some hardhats have earmuffs for hearing protection that can be lifted out of the way when you don't need them. Some ear plugs have neckbands so you don't lose them if you take them off.

✓ Have your hearing checked each year.

- Ask for at least a standard pure-tone test. Tell them your work is noisy, so they will know you may have lost some hearing.

✓ Measure the noise on site. Your local union can buy a low-cost sound meter.

✓ You Should Know

- Noise-induced hearing loss can be a serious disability. Once noise exposure damages the sensory-neural mechanism of the inner ear, the hearing loss is permanent (permanent threshold shift).
- The likelihood of permanent hearing loss increases with prolonged exposure. Noise-induced hearing loss can cause difficulty in hearing and understanding critical verbal instruction and warning sounds at work. It can also cause problems in hearing and perceiving spoken communication, thus interfering with normal social interaction outside the workplace.

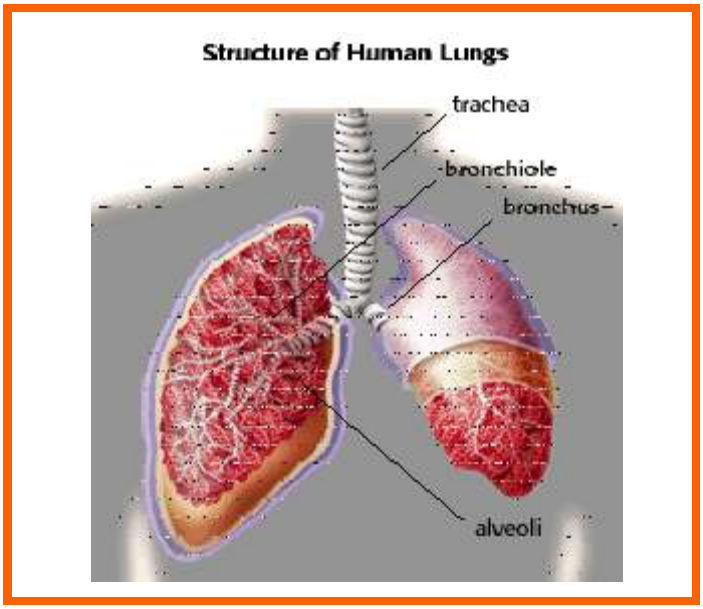
- Many workers don't want to use hearing protection. They are afraid they won't hear warning signals, like backup alarms. But some new protectors can let in voices and block other noises. You may not need the hearing protection designed for the loudest noises – just something comfortable that lets you hear talking and takes away some of the noise around you.

Accident Summary from January through May, 2004

There have been a total of 12 fatalities from January through May, 2004. A brief summary of the fatalities is presented below:

	Accident Type	Accident Summary	Recommendation
January	Fall from roof	Employee fell through the roof while walking across the transite roof panel. The panel broke and employee fell through to the concrete floor below. Employee was wearing full body harness but failed to connect to the safety line.	1. Use fall protection either as fall restraint or fall arrest 2. Check for structural stability of working surface
	Workplace Violence	Owner of a company shot by an employee over pay dispute.	1. Identify workplace violence risks in the workplace 2. Develop procedures and policies for handling workplace violence instances
February	Caught in bridge crane driveshaft	1. Employee riding on bridge crane while crane was operating 2. Lanyard caught in crane driveline pulling and wrapping employee around the driveshaft	Develop preventive maintenance procedures that incorporate the following: 1. Communication with the crane operator 2. Utilize lockout/tagout procedure during servicing and maintenance operations 3. Guarding of shaft
	Hit by elevator	Improperly setting brakes on an elevator in an oil rig. The elevator came down and hit employee on the back of the head	1. Perform hazard analysis of job function 2. Perform daily inspection of braking system to ensure operability of equipment 3. Training on proper engagement of brake on elevator
	Workplace violence	An employee called in for disciplinary action fatally shot another employee.	1. Identify workplace violence risks in the workplace 2. Develop procedures and policies for handling workplace violence instances
	Heart attack	Worker became short of breath while walking up the street to shovel snow, suffered heart attack.	Report within 8-hours to Utah OSHA all fatalities in a jobsite
March	Fall from 15 feet to the ground	Erecting rebar	1. Have a qualified engineer design support structure for rebar 2. Build both faces of rebar at the same time

	Car fell on employee causing fatal injuries	**Employee jacked up the car with a handyman jack on the wheel well and was going remove a gas tank from the car. The jack gave way and the car came down on the employee.**	**1. Job safety analysis for each type of work** **2. Use tools appropriate to the task** **3. Inspection of jack** **4. Training on standard operating procedures**
	Workplace violence	**Staff of a resident home for troubled youth was hit on the head with a baseball bat by teen age youths, fatally injuring him.**	**1. Have at least two staff at all times to handle troubled youth** **2. Redesign facility layout for ease of escape in the event of emergencies** **3. Develop procedures to address workplace violence issues for such homes.**
April	**Fall from tower crane**	**An employee disassembling a 90 foot tower crane, was working underneath the cab when the makeshift wire rope used for fall protection came loose. As a result he fell to the ground.**	**1. Proper use of fall protection, especially setting proper anchor** **2. Training on fall protection**
May	**Run over and struck by asphalt paver**	**Employee riding on asphalt paver fell and was run over by the paving unit.**	**1. Follow operators manual for equipment being operated** **2. Train people on proper equipment operation**
	Fall from scaffold	**Employee working on a 2x 6 nominal wood plank on a scaffold, 8 feet above the ground. The employee fell to the ground when the plank broke at a knot fatally injuring him.**	**1. Use of scaffold grade planks.** **2. Scaffolds shall be designed by a qualified person and shall be constructed and loaded in accordance with that design.** **3. Non-mandatory Appendix A contains examples of design and construction measures that employers may use to comply with the "capacity" and "scaffold platform construction" provisions in §1926.451(a) and (b).** **4. The employer shall have each employee who performs work while on a scaffold trained by a person qualified in the subject matter to recognize the hazards associated with the type of scaffold being used and to understand the procedures to control or minimize those hazards.** **See 1926.454(a) for more details.**



Occupational Asthma

There has been a great deal of concern about occupational asthma among employees in the workplace. Many workers do not know that they are suffering from this disease that originated from their workplace exposure. Through a joint effort between Utah OSHA and the Utah Department of Health, we are providing the following information on occupational asthma for employers and employees who are at high risk:

Asthma: Asthma is a chronic lung disease caused by airway inflammation that causes reversible airflow obstruction. Asthma is one of the ten leading chronic conditions that restrict activity.

What is Occupational Asthma?

- **There are currently more than 250 recognized agents that induce occupational asthma. Individuals with pre-existing asthma may experience exacerbation following exercise, exposure to cold, or low levels of irritant fumes or dusts that are not generally accepted as a cause of occupational asthma.**
- **Usually, occupational asthma begins after eighteen months to 5 years of exposure to the irritant. This makes prevention essential and feasible in reducing the incidence of occupational asthma.**

Who are at high risk for getting occupational asthma?

Occupation	Agent
Custodial workers and janitors	- cleaning agents
Farmers and grain handlers	- grain dust
Welders	- stainless steel fumes, cobalt
Laboratory workers	- Formalin/ formaldehyde
Poultry workers	- chickens
Autobody workers -	Acrylates (resins, glue, , sealants, adhesives) s
Brewery workers	- Chloramine T
Laboratory animal handlers	- animal hair or dust
Electronics workers	-colophony or rosin fumes (abietic acid)
Health care workers	- gluteraldehyde, latex
Hair dressers	- pursulphate salts
Paint manufacturers	-phthalic anhydride
Paint sprayers	- dimethylethanolamine
Solderers	- polyether alchohol, polypropylene glycol

Occupation	Agent
Chrome platers	- sodium bichromate, chromic acid, potassium chromate
Nickel platers	- nickel sulfate

To learn more about these and other occupations that are at high risk for occupational asthma and the agents that cause the disease go to: http://www.ccohs.ca/oshanswers/diseases/asthma.html

What is being done to prevent and reduce occupational asthma?

- **With the recognition of the growing burden of asthma on Utah citizens, the Utah Department of Health applied for and received funding from the Centers for Disease Control and Prevention (CDC) to address asthma from a public health perspective.**
- **Since February 2002, over 50 professionals working with asthma issues in organizations around the state met regularly to draft the Utah Asthma Plan.**
- **The following occupational asthma objectives, taken from the Utah Asthma Plan, were designed to help Utahns reduce the number of cases of occupational asthma.**
  - **Objective 1: Assure occupational health nurses and safety professionals are aware of the agents that are known sensitizers or irritants, those which may induce asthma relative to their particular industry.**
  - **Objective 2: Educate occupational health and safety personnel in becoming more aware of the possibility of a new workplace irritant.**
  - **Objective 3: Assist occupational health nurses and safety professionals in the workplace with information or resources to assist them in developing their industry-specific surveillance and monitoring.**
  - **Objective 4: Recommend that industries formulate a plan within the organization as to how sensitized employees will be managed in the workplace.**
  - **Objective 5: Employers should evaluate their workplace to identify chemicals and processes that trigger occupational asthma.**
  - **Objective 6: Provide adequate engineering control (e.g., ventilation), administrative controls (e.g., job rotation) and personal protective equipment (e.g., gloves, respirators etc.) to minimize exposure to hazardous substances in your workplace.**

The UOSH Asthma Program is interested to hear your comments and have your involvement! To request a hard copy of the Utah Asthma Plan, additional information about occupational asthma, or get involved in one of the various occupational asthma projects going on throughout the state, please contact:

Libbey Mathews
The Utah Asthma Program
Health Program Specialist, Occupational Asthma
lmathews@utah.gov
801-538-6441

More on Occupational Asthma and other occupational diseases encountered by custodians and janitors during their employment.

The following article is borrowed from Safety Smart's Weekly Briefing.

May 4, 2004

Custodians mop up safety risks

Some of the workers we take for granted in society are the ones we need to protect the most. For example, without custodians much of our world would be one big stinking mess.

Our wastebaskets would be overflowing, our toilets would be unbearable and our floors would be skating rinks of dirt.

What janitors go through to make the working lives of others manageable is worthy of a medal. Judging by the hazards, they are truly risking their health to keep our buildings and offices clean.

One survey of a group of custodians in Massachusetts found that they suffered widespread health problems and injuries attributed to poor training and working conditions.

The majority of the nearly 50 custodians reported respiratory problems, headaches, skin infections and sore throats attributed to working with unlabeled chemicals. Not properly labeling chemical containers violates federal occupational safety and health regulations.

The cleaning staff also reported handling blood, sharps and biohazards without personal protective equipment such as gloves.

The Massachusetts Coalition for Occupational Safety and Health has raised a concern about immigrant workers often remaining quiet for fear of repercussions that could affect their employment.

But it just doesn't happen in Massachusetts; it happens all over the world.

Custodians face many hazards on the job, including lead exposure from paint and chemical exposure from cleaning products.

According to Inform, Inc., a company that advocates strategies for a better environment, cleaning products containing ammonium quaternary disinfectants and monoethanolamine have caused asthma in some workers. Chlorhexidine and chloramine-T have also caused asthma in workers who use them.

California data from the mid-1990s indicate that custodians experience the highest rate of occupational asthma (625 cases per one million workers).

Eliminating the use of cleaners that contain asthmatic and respiratory irritants is a precautionary

approach that could reduce this risk, Inform says.

When selecting cleaning products, custodians should review its material safety data sheet (MSDS).

Public school janitors can come into contact with blood and other body fluids on a regular basis. Therefore, exposure to infection is a real hazard. It's a scary thought, but some custodians still clean restrooms without wearing gloves or other protective equipment. Managers who don't properly train their cleaning staff on bloodborne disease prevention are open to liability.

Custodians who work the night shift alone are taking a serious risk because a medical emergency may not be discovered until morning. In this case, school administrators should provide a method of instant communication with the custodian.

Managers must also provide ergonomically-designed tools and proper (safe lifting) training to prevent back injuries and repetitive strain.

Custodians working around asbestos must take every precaution to protect themselves. Employers must disclose the existence of asbestos and take steps to protect all workers from potential exposure.

Dry dusting of lead-based paint creates health hazards for employees, visitors and tenants. Managers must not let their workers remodel or paint over lead-paint surfaces unless proper safety procedures are implemented.

A Safety Guide for Tree Trimmers

In the last eleven years (1993-2004) there have been about 100 accidents during tree trimming operations nationwide. Approximately 50% of these accidents resulted in fatalities. The high rate of injuries and fatalities reflect the need for employers to train and educate their employees on safe work practices and establish standard operating procedures for each site before the tree trimming operation.

The following information is a guideline for employers during the tree trimming operation for their employees.

- ✓ **Formal safety program and training.**
- ✓ **"On-the-job" instruction by the crew foreman.**
- ✓ **Training on hazards posed by overhead power lines for all employees who work near these lines.**
- ✓ **Periodic refresher courses should be given to remind employees of the hazards.**
- ✓ **An initial and daily survey should be conducted prior to the start of any work involving overhead power lines. Supervisory personnel should point out potential problem areas to workers prior to the start of work. The survey should include the following:**
  - ▸ **Electrical hazards (such as working near energized overhead or downed power lines)**
  - ▸ **Emphasize that most overhead high-voltage power lines are uninsulated**
  - ▸ **Assume that all power lines are energized and to avoid all contact (direct or indirect) until the lines are verified as being de-energized.**
  - ▸ **Climbing, felling, topping, and pruning trees**
  - ▸ **Mobile equipment**
  - ▸ **Hand and portable power tools**
  - ▸ **Fall protection equipment and other protective gear**

What type of safety equipment do I need during tree trimming?

- ✓ **orange safety vests,**
- ✓ **ANSI approved safety glasses,**
- ✓ **hearing protection such as ear plugs,**
- ✓ **ANSI approved face protection**
- ✓ **ANSI approved hard hats,**
- ✓ **leather chaps,**
- ✓ **climbing gear,**
- ✓ **safety cones,**
- ✓ **“Men Working" signs. All workers must be certified in first aid.**
- ✓ **Workers shall wear orange safety vests in the woods during the hunting season and at intersections.**
- ✓ **ensure that employees wear high visibility clothing while performing operations on the sides of roadways normally open to the public.**
- ✓ **The National Safety Council's Accident Prevention Manual for Industrial Operations in its classification of PPE (subheading-special clothing) recommends the use of high visibility and night hazard clothing for construction, utility, and maintenance workers; and police officers and firefighters whose work exposes them to traffic hazards.**

What are the duties of flagmen?

- ✓ **ensure that a flagman or lookout is present while work is being performed on the sides of roadways normally open to the public. Additionally, ANSI D6.1-1971 requires that in positioning flagmen, consideration must be given to maintaining color contrast between the flagman's protective garments and his/her background.**
- ✓ **What do I need to know about hoisting equipment?**
- ✓ **ensure that safe work procedures address the manner in which the load lines of hoisting equipment are attached to the load so that the full strength of the load line is available and that the lifting capacity of the equipment is not exceeded.**
- ✓ **Outriggers should be placed on solid bases to avoid tipping and should be fully extended.**

What is the minimum training do I need to address electrical hazards encountered during tree trimming?

- ✓ **Electrical safety, including the hazards of feedback electrical energy, the use of portable electric generators, and downed power lines [NIOSH 1987a].**
- ✓ **The correct use of fall protection equipment**
- ✓ **Safe work procedures to prevent inadvertent cutting of climbing ropes, lanyards, and safety belts or straps**
- ✓ **Inspection of trees and tree limbs for structural weakness before climbing or cutting Safe climbing procedures such as breaking or cutting off dead limbs while climbing, placing hands and feet on**

separate limbs, and limited shinning distance to 15 feet.

- ✓ **Cardiopulmonary resuscitation**
- ✓ **All OSHA and ANSI standards applicable to aerial bucket trucks**
- ✓ **Hazards associated with the hoisting of personnel, equipment, and materials, especially near energized overhead power lines**
- ✓ **Positioning of the boom to maintain minimum working distances from energized overhead power lines**
- ✓ **Procedures for emergency situations (for example, inadvertent contact of the boom with an energized power line) such as who to contact in the event of an accident.**

What are some specific safety and health factors we should look at before beginning tree trimming?

- ✓ **The location and height of a tree and the availability of appropriate mobile equipment. In areas where trees overhang or are close to a street, trucks with aerial buckets or telescoping ladders could be used for trimming.**
- ✓ **Notify the utility company when an aerial bucket truck or other boomed vehicle must operate near a power line or when work must be performed within minimum working distances. (Utah OSHA requires a minimum of 10 feet for tree trimmers from any overhead powerline)**
- ✓ **The utility company and the employer should then discuss the options for protecting workers: de-energizing and grounding the power lines or covering them with insulating hoses or blankets.**
- ✓ **Ensure that workers adhere to established safe work procedures and maintain the minimum working distances from energized conductors established by OSHA.**
- ✓ **Prohibit the use of conductive tools or materials where they may contact overhead power lines or electrical conductors. Substitute nonconductive tools and materials, and maintain working distances from power lines**
- ✓ **When overhead power lines are present, provide nonconductive personal protective equipment (such as headgear, gloves, etc.) and enforce its use.**
- ✓ **Provide workers with appropriate fall protection equipment (for example, climbing rope and safety saddle) and make sure that they use it.**
- ✓ **Inspect all fall protection equipment before each use. Remove damaged or defective equipment from service; replace it or repair it according to the manufacturer's specifications.**

What information do I need to know about aerial buckets?

- ✓ **Employees must be secured to the boom, basket or tub of an aerial device through the use of a safety belt, body belt or safety harness equipped with a safety strap or lanyard.**
- ✓ **Belting off to an adjacent pole, structure or piece of equipment is not permitted.**
- ✓ **Know the boom, basket and platform load limits. Never exceed these weight restrictions.**
- ✓ **Set the vehicle braking system prior to elevating personnel. Use wheel chocks if the vehicle is parked on an incline.**
- ✓ **Never sit on the edge of the basket or use a ladder or other object on top of the basket to attempt to gain a greater height.**
- ✓ **Do not wear climbing gear while performing work from an aerial device.**
- ✓ **Prior to leaving the basket of an aerial device for entry into a tree, secure a safety line to the tree before removing the safety line attached to the basket. Reverse this procedure when entering the basket from a tree.**
- ✓ **Lower level controls may only be changed with the prior permission of the employee in the basket except in the event of an emergency.**
- ✓ **Do not move an aerial lift device while the boom is elevated and employees are in the basket.**
- ✓ **Before moving an aerial device for travel, inspect the boom to make sure it is properly cradled and outriggers are in the stowed position.**

What do I need to know about Wood Chipper Shredders?

- ✓ **Inspect, test and confirm all safety devices are in proper working order before each work shift. Check for and replace any damaged or missing machine parts before use.**
- ✓ **Train employees on the proper and safe use of the wood chipper shredder, following operators manual.**
- ✓ **Ensure the hood that covers the chipper knives is completely closed and latched prior to starting the wood chipper shredder.**
- ✓ **Wear proper clothing and protective gear such a long sleeve shirt, pants that are comfortable but not baggy or loose, leather work boots (preferably with safety toes that meet ANSI standard Z41.1), leather work gloves, hard hat, eye protection and hearing protection. Remove all jewelry or items of clothing that may become caught or tangled in the material being shredded or in the operating machinery.**
- ✓ **Accomplish work with at least two people. Never operate the equipment alone.**
- ✓ **When starting operation of the wood chipper shredder, run the machine at the lowest possible speed and listen for any noise that might indicate broken or loose parts. If an unusual noise is discovered DO NOT use the machine until it can be inspected and/or repaired if necessary by a competent person.**

- ✓ **Keep your hands and feet out of the in-feed hopper.**
- ✓ **Work from the side of the wood chipper shredder to minimize the risk of getting tangled in the branches, as well as allow quick access to the emergency shutoff.**
- ✓ **Always feed brush and tree limbs butt end first into the hopper of the wood chipper.**
- ✓ **Move away from the wood chipper once it has grabbed the material(s) intended for shredding.**
- ✓ **Lay shorter materials on top of longer materials, or utilize a long branch to push the shorter material through the in-feed hopper.**
- ✓ **DO NOT load small twigs and leaves into the in-feed hopper.**
- ✓ **Keep the area around the wood chipper shredder clear of any tripping hazards.**

- ✓ **Make sure that all internal machine parts have come to a complete stop prior to opening the hood that is covering the chipper disc or drum of the wood chipper.**

What do I need to know about fueling equipment?

- ✓ **Smoking is prohibited within 25 feet of areas where fueling is conducted.**
- ✓ **Do not fuel an internal combustion engine fuel tank while the engine is running.**
- ✓ **Replace the fuel tank cap prior to starting the engine.**
- ✓ **Use only safety containers equipped with an automatic closing cap and flame arrester for transporting and storing fuel for portable equipment.**
- ✓ **Trucks supporting equipment which needs to be refueled in the field should be equipped with fire extinguishers.**
- ✓ **Ensure grounding (metal to metal contact) during fueling to prevent static charge buildup.**
- ✓ **Do not use cell phones or other electronic devices during fueling.**